

REMARKS

1. Independent claim 1 is amended to define Applicant's apparatus in terms of measuring distance to the fixed device and controlling generation of a ring tone according to a comparison.

Independent claim 20 and dependent claims 2, 5, 10-12, 15, 21 and 22 are amended in several particulars for purposes of clarity in accordance with current Office policy, to assist the examiner and to expedite the compact prosecution of this application.

2. One page 2 first paragraph of the Office action, the Examiner required a new title that is clearly indicative of the invention to which the claims are directed, since "wire/wireless telephone is indefinite as to meaning a landline phone, a cellular phone, a cordless phone or a combination of such". Applicant respectfully disagrees with the Examiner.

In wireless broadband internet (WiBro) technology, the article "wire" means the wired line used to transmit data between telephone line modems, cable modems, routers, etc., and the article "wireless" means using low-powered radio waves to transmit data between devices. In fact, the article "wire/wireless" has been used extensively in telecommunication systems and telephone systems, especially in East Asian, such as Korean, China. U.S. Patent 5,995,593 to Cho entitled "WIRE/WIRELESS COMMUNICATION SYSTEM FOR COMMUNICATING BETWEEN TWO LOCATIONS USING TELEPHONE NETWORK" discloses a telephone network system for wire/wireless communication. Therefore, it is reasonable to use the article "wire/wireless" in the present application representing a telephone system comprising a wired device that transmit signal using wired line and a wireless device that transmit signals using wireless communication. Please

refer to the PTO-1449 form for detailed information about many other cited articles which discuss hardware that is commercially available and described as “wire/wireless” in conformity with IEE 802.16 and the use of that term in the WiBro art.

3. On page 2, last paragraph of the Office action, the Examiner rejected claims 1 through 5 under 35 U.S.C. §102(b) as being anticipated by Cannon et al. (US 2001/0029187). For the reasons stated below, it is submitted that the invention recited in the claims 1 through 5 is patentably distinguishable from the prior art cited by the Examiner.

3-1. The present invention as claimed in amended claims 1 through 5 generally relates to an apparatus that selectively generates a calling tone for a portable device in a wire/wireless telephone on the basis of distance between the portable device and a fixed device. The portable device gauges the distance by detecting the electric field strength of a ring receiving generation control signal received from the fixed device after a ring signal is received, and compares the detected electric field strength values with preset field strength values that correspond to the distance values between the portable device and the fixed device. See, for example, the following paragraphs in Applicant’s original specification:

- Page 10, paragraph 47, lines 10-11, “it is possible to include a storage unit storing many preset electric field strength values and distance values in accordance with the electric field strength values”;
- Page 26, paragraph 112, lines 17-18, “measures the distance to the fixed device 100 by comparing the converted digital signal with a value preset in the storage 306”;
- Page 27, paragraph 115, lines 12-14, “a distance value to the fixed device 100 in accordance with an electric field strength value can be stored in a table by the calling

tone generating control signal received from the fixed device 100”.

In addition, the portable device compares the gauged distance value with a preset reference distance value input by the user, disables generation of the calling tone when the measured distance is less than the preset reference distance value, or generates the calling tone when the measured distance is not less than the preset reference distance. See the cited paragraphs:

- Page 10, paragraph 47, lines 11-14, “The controller controls disabling of the generation of the melody sound when the distance measured by the distance measurer is less than the preset reference distance, and generates the melody sound when the measured distance is not less than the preset reference distance”;
- Pages 11-12, paragraph 51, line 21 in page 11 and lines 1-2 in page 12, “If the user selects the manual mode through the key input unit, the controller compares the distance measured by the distance measurer with the reference distance reset by the user through the manual mode, and controls generation of the melody sound for the received ring according to the comparison result”.

Therefore the user may locate the portable device without hearing unpleasant calling tones owing to the different calling tones from the fixed device and the portable device.

In support of this rejection, Paper No. 20060526 stated that:

“Distance measure means for measuring distanced [*sic*, “distance”] to the fixed device by using the electric field strength detected by the detector means (paragraph 0022, signal strength is correlated with the distance between the base and handset unit and paragraphs 0025 and 0030, handset (109) measures the strength of the particular signal),

Controller means for comparing the distance measured by the distance measurer means to preset reference distance and for controlling generation of a melody sound for a received ring according to a comparison result (paragraph 0021, processor (117) of the handset adjusts the signal provided to alerting mechanism based on a condition, paragraphs 0026 and 0027, estimate the distance between base unit and the handset, a measure of a condition and the alerting signal is adjusted.)”¹

¹ Paper No. 20060526, Examiner’s comments, page 3.

A thorough reading of Cannon et al. '187 discloses a cordless telephone including a page adjustment mechanism to affect an alerting signal output to locate a misplaced handset, wherein the page adjustment mechanism is based on user control or a condition, such as received signal strength, or ambient noise.

The pending claims are patentably distinguishable from Cannon et al. '187 because present invention selectively generates a calling tone according to a ring receiving generation control signal that is received from a fixed device after a ring signal has been received; Cannon '187 however, adjusts a paging signal according to a paging initiation that is set by a user. In addition, the present invention as defined by claims 1 through 5 includes a key input unit for applying a reference distance, and the calling tone is generated if the distance between the fixed device and the portable device is more than the reference distance, or disabled if the distance is less than the reference distance.

3-2 With respect to independent claim 1, on page 3, in the second paragraph of the Office action, the Examiner alleges that Cannon et al. '187 teaches “a detector means for detecting electric field strength of a ring receiving generation control signal when the ring receiving generation control signal is received from a fixed device after a ring signal is received”, by citing figure 1, paragraphs 20, 28 and 29. Applicant respectfully disagrees with this assertion by the Examiner.

A review of the cited paragraphs reveals that the Examiner asserts that the recited “ring receiving generation control signal” in the present application corresponds to the “particular signal” in paragraph 20 of Cannon et al. '187. Whereas the particular signal is merely initiated by a user

input in order to locate the misplaced handset in Cannon et al. '187, the ring receiving generation control signal in the present invention is initiated by a received ring signal. In other words, Cannon et al. '187 merely discloses detecting the signal strength of the particular signal initiated by a user input. In contrast, claim 1 defines detecting electric field strength of a ring receiving generation control signal received from a fixed device after a ring signal is received. There is no Applicant's "ring receiving generation control signal" found in Cannon et al. '187. In short, Cannon et al. '187 teaches a manually triggered paging signal to address a different problem in the art; consequently, there is no prima facie demonstration of anticipation under 35 U.S.C. §102(b).

3-3. With respect to independent claim 1, on page 3, in the fourth paragraph of the Office action, the Examiner further alleges that Cannon et al. '187 teaches a controller means for comparing the distance measured by the distance measurer means to preset reference distance and for controlling generation of a melody sound for a received ring according to a comparison result, by citing paragraphs 21, 26 and 27. Applicant respectfully disagrees with this assertion by the Examiner.

A review of the cited paragraphs of Cannon et al. '187 reveals that whereas Cannon et al. '187 discloses adjusting the signal characteristics, for example, volume, duration, pitch, cadence or any combination of these, there is no disclosure about controlling generation of a melody sound according to a comparison result. In contrast, claim 1 expressly discloses that the apparatus controls the generation of a melody sound, i.e., disabling the generation of the melody sound when the measured distance is less than the preset reference distance and generating the melody sound when the measured distance is more than the preset reference distance, as is disclosed and claimed in claim

6 in present application. Therefore, the apparatus as claimed in claim 1 is patentably distinguishable from Cannon et al. '187.

3-4. With respect to dependent claim 2, on pages 3-4, in the fifth paragraph of the Office action, the Examiner also alleges that Cannon et al. '187 teaches “a comparator for comparing the electric field strength detected by the detector means to preset electric field strength values”, by citing paragraphs 28 and 30. Applicant respectfully disagrees with this assertion by the Examiner.

Please note that the Applicant's apparatus, as claimed in claims 1 through 5, controls the generation of a calling tone based on two comparison results: firstly it compares a detected electric field strength to preset electric field strength values to gauge a distance between the fixed device and the portable device; secondly it compares the gauged distance between a reference distance to control the generation of the calling tone.

Whereas Cannon et al. '187 discloses “read a measure value from a register therein and adjust the alerting signal accordingly” (paragraph 28 in Cannon et al. '187) and “comparing the time of receipt to a time stamp thereon..... adjust the alerting signal based on this measure” (paragraph 30 in Cannon et al. '187), the comparison disclosed by Cannon et al. '187 is merely for adjusting the alerting signal. In contrast, the pending claim 2 discloses measuring distance by comparing the detected electric field strength values of a ring receiving generation control signal, which is received from the fixed device after a ring signal is received, with many preset field strength values, that correspond to the preset distance values between the portable device and the fixed device. In other words, the pending claims discloses a distance gauge for obtaining the exact distance values, which

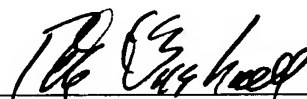
corresponds to the first comparison as mentioned in the previous paragraph. Therefore, the apparatus as claimed in claim 1 is patentably distinguishable from Cannon et al. '187.

4. Regarding claim 6, since it defines the pending claim 1's step of "controlling generation of a melody sound for a receiving ring according to a comparison result", it will remain as a dependent claim depending on claim 1.

In view of the foregoing amendments and remarks, all claims are deemed to be allowable and this application is believed to be in condition to be passed to issue. If there are any questions, the examiner is asked to contact the applicant's attorney.

No fee is incurred by this Amendment.

Respectfully submitted,



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Folio: P56926
Date: 28 August 2006
I.D.: REB/YM